| S.No: 42 | Exp. Name: ***Write a C program to print the Fibonacci series up to the given limit using Functions*** | Date:2023-01-15 |
|---|---|---|



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**Aim:**

Write a program to print the `Fibonacci series` up to the given limit.

At the time of execution, the program should print the message on the console as:

```
Enter the maximum limit to generate the Fibonacci series :
```

For example, if the user gives the **input** as:

```
Enter the maximum limit to generate the Fibonacci series : 15
```

then the program should **print** the result as:

```
The Fibonacci series is : 0 1 1 2 3 5 8 13
```

**Note:** Write the function **fibonacci()** in `Program708a.c`.

**Source Code:**

Program708.c

```
#include <stdio.h>
#include "Program708a.c"
void main() {
   int number;
   printf("Enter the maximum limit to generate the Fibonacci series : ");
   scanf("%d", &number);
   fibonacci(number);
}
```

Program708a.c

```
void fibonacci(int n);
void fibonacci(int n)
{
   int n1=0,n2=1,temp=1;
   printf("The Fibonacci series is : %d",n1);
   while(n2<=n)
   {
      temp=n1+n2;
      n1=n2;
      n2=temp;
      printf(" %d",n1);
   }
   printf("\n");
}
```

Execution Results - All test cases have succeeded!

| Test Case - 1 |
|---|

| User Output |
| --- |
| Enter the maximum limit to generate the Fibonacci series : 30 |
| The Fibonacci series is : 0 1 1 2 3 5 8 13 21 |